

## **TITLE**

**Osteospermum Plant Named 'Kakegawa AU10'**

## **GENUS AND SPECIES**

[0001] *Osteospermum fruticosum*

## **VARIETY DENOMINATION**

[0002] 'Kakegawa AU10'

## **BACKGROUND OF THE NEW PLANT**

[0003] The variety 'Kakegawa AU10' originated from a gene pool population made in 1999 in Misato, Japan. In May 1999, three varieties were intercrossed and seed from these three plants were bulked to make the population. The three varieties were 'Brightside' (US PP 10,596), 'Purple Passion' (unprotected, now only available in 'Passion Mix') and an unnamed breeding line of unknown origin. The unnamed breeding line possessed purple flowers, an erect plant habit and very vigorous growth. It is not known which two varieties were the actual parents for 'Kakegawa AU10'. Seed from this population was sown in April 2000 and plants were transplanted to the outdoor field. In August 2000, selections were made for vegetative propagation using plant habit, ability to bloom during warm temperature periods and flower color as selection criteria. One selection, designated breeder code M1-77, became the new variety 'Kakegawa AU10'.

## **DESCRIPTION OF PHOTOGRAPH**

[0004] This new *Osteospermum* plant is illustrated by the accompanying photograph which shows blooms, and foliage of the plant in full color. The colors shown are as true as can be reasonably obtained by conventional photographic procedures.

[0005] Fig. 1 shows a close-up view of a single inflorescence.

[0006] Fig. 2 shows the mature inflorescence.

## **DESCRIPTION OF THE NEW CULTIVAR**

[0007] The following detailed descriptions set forth the distinctive characteristics of 'Kakegawa AU10'. The data which defines these characteristics were collected from asexual reproductions carried out in Salinas, California. Data was collected on plants 28 weeks from transplanting rooted cuttings into 16 cm diameter pots, one plant per

pot. Color references are to the RHS Colour Chart of The Royal Horticultural Society of London (RHS).

### DESCRIPTION OF THE NEW PLANT

#### Classification:

- [0008] Family: Compositae
- [0009] Botanical: *Osteospermum fruticosum*
- [0010] Commercial name: Cape Daisy

#### Parentage:

- [0011] Female and male parent are unknown. Variety selected from a gene pool population that was created by intercrossing the varieties 'Brightside' (US PP 10,596), 'Purple Passion' (unprotected, now only available in 'Passion Mix') and an unnamed breeding line with purple flowers, an erect plant habit and very vigorous growth.

#### Growth:

- [0012] Time to produce a rooted cutting - Cuttings will colonize a 2.5 cm diameter by 2.5 cm tall greenhouse tray cell with peat-based plant media in approximately five weeks. Cuttings are dipped in a normal dilution (1:9) of Dip 'N Grow™ root inducing solution in water. The trays are misted hourly during rooting.

- [0013] Environmental conditions for plant growth - Rooted cuttings are transplanted to pots with a 16 cm diameter, one plant per pot. Peat moss-based growing media is used. The pots are watered using a 150-200 ppm fertilizer solution containing 18% nitrogen, 8% phosphorus and 18% potassium. The soil is allowed to dry between waterings. During the first few weeks after transplanting the plants should have evening temperatures around 15-18°C for good root growth. When plants reach 7.5-10 cm in height they are pinched back to 5-6 leaves to promote branching. The plants are grown through the winter in cool greenhouses (10-15°C) with no shading to keep their habit compact. In spring, after the plants have received at least four weeks of cool conditions to vernalize, warmer temperatures can be used to promote blooming. Spring and summer daytime high temperatures in Salinas, California, where the data was collected, range from 16-25°C.

- [0014] Time to bloom from propagation - 18-20 weeks when rooted vegetative

cuttings are transferred to a six-inch diameter pot in late fall and given several weeks of below 50 degree Fahrenheit temperature prior to increasingly warmer spring weather. Flowering season is in April through June and is temperature (requiring to initiate bud development) and day length dependent (long days). They will go out of flower when temps are too high such as in the southern areas of the country.

[0015] Habit - Upright and branching

[0016] Life cycle - Perennial

**Plant:**

[0017] Form - Branching , dense

[0018] Plant Size - height is 45-65 cm; width 60-80 cm

**Stems:**

[0019] Anthocyanin color - None

[0020] Internode length - 0.5-2.0 cm

[0021] Pubescence - Glabrous

[0022] Pubescence shape - Linear

[0023] Pubescence color - White (RHS N155A)

[0024] Stem color - Yellow-green (RHS 144A)

[0025] Stem Description - Strong, erect

[0026] Stem diameter - 5.0-6.0 mm

**Leaves:**

[0027] Arrangement - Alternate

[0028] Shape - Oblanceolate

[0029] Apex - Acute

[0030] Base - Decurrent

[0031] Margin - Serrate

[0032] Venation - Pinnate

[0033] Surface - Dull, rough

[0034] Surface pubescence - Slight, white (RHS N155A)

[0035] Length - 6.0-7.0 cm

- [0036] Width - 2.5-3.5 cm
- [0037] Thickness - 1.0 mm
- [0038] Color - Upper is green (RHS 147A); Lower is green (RHS 137A)
- [0039] Venation color - Upper is yellow-green (RHS 144A); Lower is yellow-green (RHS 144A)

**Inflorescence:**

- [0040] Type - Capitulum (head); disc florets are staminate and ray florets are carpellate.
- [0041] Diameter - 5.5-6.0 cm
- [0042] Depth - 1.0-1.5 cm
- [0043] Petal numbers - 15-18
- [0044] Disc diameter - 0.9-1.1 cm
- [0045] Disc floret number - 60-70
- [0046] Flowering habit - Determinate
- [0047] Flowers life span - 3-4 days
- [0048] Fragrance - None
- [0049] Seed production - None
- [0050] Peduncle length - 3.0-5.5 cm
- [0051] Peduncle diameter - 2.0 mm
- [0052] Peduncle color - Yellow-green (RHS 144A)
- [0053] Peduncle texture - Dull, slight pubescence
- [0054] Phyllaries - 15-18 per inflorescence, free, arranged symmetrically; Length - 6.0-8.0 cm; Width - 1.0-2.0 mm; Apex - Acute; Margin - Entire; Shape - Linear, acute tip; Color - Upper, green (RHS 143A); Lower, green (RHS 143A)

**Ray florets.**

- [0055] Corolla - One petal per ray floret. Only the outer row of florets are the ray florets.
- [0056] Ovary - Superior
- [0057] Petals length- 2.3-2.7 cm

- [0058] Petal width - 0.8-9.0 cm
- [0059] Petal shape - Spatulate
- [0060] Petal apex - Obtuse with tiny indentation at tip
- [0061] Petal margin - Entire
- [0062] Petal color - Upper, purple (RHS N78A) fading to white (RHS N155A) near the base. Basal most 3-4 mm purple-violet (RHS 80B); Lower, center stripe 4 mm purple (RHS 78D), 2 outer stripes 2 mm yellow (RHS 3D), Margin stripes 1 mm purple (RHS 82C)
- [0063] Petal pubescence - Glabrous
- [0064] Pistil form - One style with two stigma branches
- [0065] Pistil length - 3-4 mm
- [0066] Stigma color - Violet-blue (RHS 92C)
- [0067] Style color - White (RHS N155A)

**Disc florets:**

- [0068] Bud color - (color at top, as seen looking at inflorescence) green (RHS 143A)
- [0069] Bud shape - Tubular
- [0070] Bud apex - Rounded
- [0071] Bud surface - Pubescent
- [0072] Bud size - Length 1.0 cm; width 1.0 mm
- [0073] Stamens - 5, fused into a single tube
- [0074] Anther color - Violet-blue (RHS N92C)
- [0075] Pollen color - orange (RHS 25B)

**DISEASE AND INSECT RESISTANCE**

- [0076] Osteospermum is very disease resistant and plants can be susceptible to aphids, thrips, whiteflies and worms.

**COMPARISON WITH KNOWN CULTIVARS**

- [0077] 'Kakegawa AU10' is a distinct variety of Osteospermum owing to its petal color and the contrast between white petal base and colored petal center and tip.

'Kakegawa AU10' is most similar to the variety 'Highside', the subject of US PP 10,595; however, there are numerous differences as shown in Table 1 below.

Table 1

<b>Trait</b>	<b>'Kakegawa AU10'</b>	<b>'Highside'</b>
Upper Petal Colors	Purple-pink petals with shades of purple (RHS N78A) fading to white and then to a lighter purple-pink (RHS N78D) at the petal base	Red-purple (RHS 72B) with shades of lighter red-purple (RHS 70B) between petal veins
Inflorescence Diameter	5.0-6.0 cm	5.5-7.0 cm
Pollen Color	Orange (RHS 25B)	Yellow-orange (RHS 23A)
Stem Branching	Stems branch many times without pruning	Stems must be pinched at tip to promote branching
Ability to Flower when warm	Will continue to flower even if night time temperatures are above 50 degrees Fahrenheit	Flower bud formation stops if night temperatures do not drop below 50 degrees Fahrenheit